

A Description of Persons Reporting Possible Arthritis and Doctor-diagnosed Arthritis



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Background

The method of estimating the burden of arthritis in the population using the Behavioral Risk Factor Surveillance System (BRFSS) Survey has changed over time. From 1996-2001, the Centers for Disease Control and Prevention (CDC) Arthritis Program recommended the case definition for arthritis include persons with doctor-diagnosed arthritis, as well as those with chronic joint symptoms (CJS), who possibly had undiagnosed arthritis (See Table 1). However, during this five-year period, CDC observed that this approach produced irregular estimates of arthritis from year to year and so reevaluated the case definition.¹

After conducting a validation study in 2001 and consulting with public health officials and physicians, CDC staff discontinued the use of this estimate and decided using doctor-diagnosed arthritis alone was the measure of choice when estimating the prevalence of arthritis. The shift to using doctor-diagnosed arthritis began in 2002.^{1,2}

In 2002, CDC also recommended that respondents who reported CJS but no history of doctor-diagnosed arthritis be treated as a distinctly separate group and considered as persons who have possible arthritis (See Appendix A). This recommendation was consistent with efforts by other chronic disease programs to estimate the number of people either undiagnosed or at risk for a condition (e.g., diabetes). It is also consistent with Healthy

People 2010 Objective 2-7, which is to increase the proportion of adults who have seen a health care provider for their chronic joint symptoms.³

Efforts to better characterize persons with possible arthritis and to identify the best approach to incorporate them into measuring the burden of arthritis are underway. In 2005, the CDC Arthritis Program funded Utah and three other states and asked them to add questions to their Behavioral Risk Factor Surveillance System (BRFSS) survey to better describe persons with possible arthritis (See Appendix B). Additionally, CDC will be analyzing data about people with possible arthritis from a national sample collected in 2005 through the Arthritis Conditions Health Effects Survey (ACHES).

To describe persons with possible arthritis, the Utah Department of Health Arthritis Program studied data from the 2005 BRFSS state-added survey questions found in Appendix B. Only those individuals who met the definition of possible arthritis were asked these questions.

Table 1. Comparison of Questions Used to Define Doctor-diagnosed Arthritis and CJS for the Behavioral Risk Factor Surveillance System Surveys, 1996-2002

Years of Use	Doctor-diagnosed Arthritis	CJS*	
Old 1996-2001	Have you ever been told by a doctor that you have arthritis?	During the past 12 months have you had pain, aching, stiffness, or swelling in or around a joint?	Were these symptoms present on most days for at least one month?
New 2002+	Have you ever been told by a doctor or other health care professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus or fibromyalgia?	The next question refers to your joints. Please do not include the back or neck. During the past 30 days, have you had any pain, aching or stiffness in or around a joint?	Did your joint symptoms first begin more than three months ago?

*Respondents who answered "Yes" to both questions in the last column and who had not been told by a doctor or other health care professional they had arthritis were defined as having possible arthritis.

Results: State-added Survey Questions

In 2005, 811 Utah adults reported possible arthritis. Males (19.0%) were more likely to report possible arthritis than females (13.8%). Individuals aged 35-49 were most likely to report possible arthritis (18.8%), followed by persons 18-34 years of age (16.6%). Persons who were 65 and older were least likely to report possible arthritis (11.4%). Females (25.8%) were more likely to report doctor-diagnosed arthritis than males (19.5%). Persons 18-34 were least likely to report doctor-diagnosed arthritis and those over age 65 were most likely to report doctor-diagnosed arthritis (53.0%) (See Table 2).

When persons who were determined to have possible arthritis were asked how long ago their joint symptoms began, 40.5 percent reported that it had been less than two years ago. However, more than one in four (26.3%) stated their symptoms started 10 or more years ago. The remaining 33.2 percent reported the onset of their symptoms was between three and nine years ago (See Table 3).

Nearly two-thirds of survey participants who reported possible arthritis (63.0%) said their symptoms were present on most days for at least one month, and nearly one-third (32.5%) said they had pain, aching or stiffness from their joint symptoms during seven of the past seven days. However, 15.3 percent indicated they did not have pain during the past seven days.

Respondents reported their average pain level over the prior seven days on a scale from 0 (no pain) to 10 (pain as bad as it could be). More than two-thirds of individuals with possible arthritis (68.3%) stated their joint pain was three or less on the 10-point scale. More than two-thirds (67.3%) also reported they had not taken a prescription or non-prescription medication for their joint symptoms in the past seven days.

Table 2. Prevalence of Doctor-diagnosed Arthritis and Possible Arthritis by Gender and Age Group, Utah 2005

	Arthritis	Possible Arthritis
Overall Prevalence	22.7%	16.4%
Gender		
Male	19.5%	19.0%
Female	25.8%	13.8%
Age Group		
18-34	7.8%	16.6%
35-49	20.1%	18.8%
50-64	40.2%	15.9%
65+	53.0%	11.4%
Source: 2005 Utah BRFSS Survey		

Table 3. Length of Time Since the Onset of Symptoms for Persons Reporting Possible Arthritis

Onset of Symptoms	Percentage
Less than 1 Year Ago	14.5%
1-2 Years Ago	26.1%
3-4 Years Ago	16.1%
5-9 Years Ago	17.1%
10+ Years Ago	26.3%
Source: 2005 Utah BRFSS Survey	
Note: Percentages may not add to 100 percent due to rounding	

Table 4. Reasons For Not Seeing a Doctor Among Persons Who Reported Possible Arthritis

Reasons for Not Seeing a Doctor for Joint Symptoms	Percentage
Symptoms were not that serious/not important	74.5%
Don't know/Not sure/Refused	9.8%
Self-treatment works	8.8%
Misclassified-Visited Doctor	5.9%
Costs too much/No health insurance	1.0%
Source: 2005 Utah BRFSS Survey	

Among those with possible arthritis who had not seen a doctor for their joint symptoms, three-fourths (74.5%) said their symptoms were not serious enough to see a doctor. Nearly one in 10 (8.8%) did not see a doctor because self-treatment worked. Another 5.9 percent were misclassified and had seen a doctor for their joint symptoms. Only one individual reported the cost was too much or lacked health insurance (See Table 4).

One in three persons with joint symptoms who had seen a doctor (34.0%) reported the cause of their joint symptoms was due to bone spurs or damaged cartilage. Nearly one in four (23.9%) reported their symptoms were due to an injury or were work-related. Slightly less than 10 percent (9.4%) said their joint symptoms were due to a bone disease or other chronic disease. Only 7.5 percent said their joint symptoms were due to arthritis (See Table 5).

Table 5. Cause of Joint Symptoms Among Persons Who Reported Possible Arthritis

Cause of Joint Symptoms	Percentage
Bone Spurs/Cartilage	34.0%
Injury/Work-related	23.9%
Didn't know/Not sure/Refused	13.2%
Bone Disease or Other Chronic Disease	9.4%
Arthritis	7.5%
Doctor didn't say/know	6.9%
Bursitis, Tendonitis, Tennis Elbow, Carpal Tunnel Syndrome	3.8%
Age	1.3%
Source: 2005 Utah BRFSS Survey Note: Percentages may not add to 100 percent due to rounding	

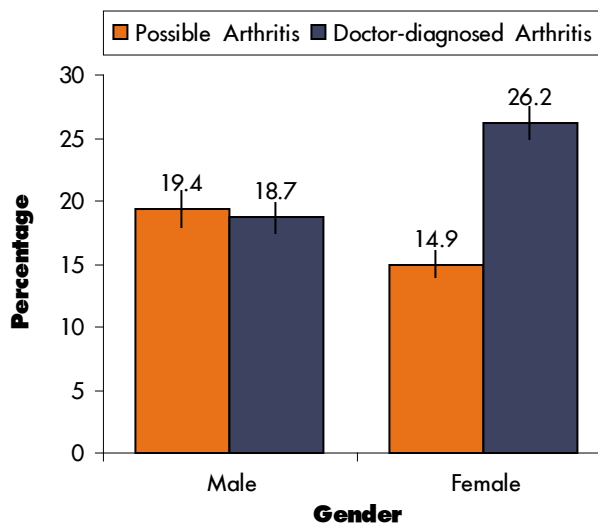
Results: Combined BRFSS Surveys

To further describe and compare persons with possible arthritis and doctor-diagnosed arthritis, the Utah Arthritis Program combined data from the 2002, 2003 and 2005 BRFSS Surveys. Appendix C provides the specific BRFSS questions.

The prevalence of possible arthritis exceeded doctor-diagnosed arthritis for males (Figure 1) and those under age 50 (Figure 2).

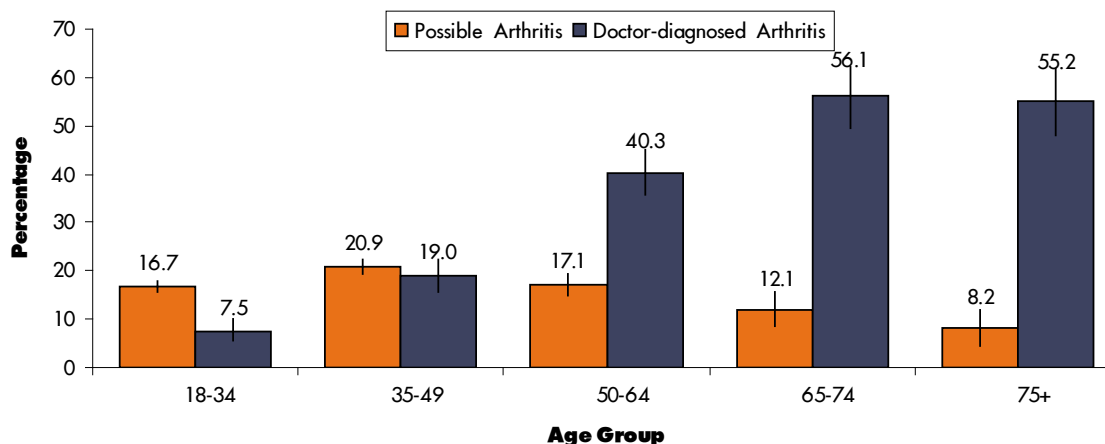
1

Possible Arthritis and Doctor-diagnosed Arthritis by Gender, Utah BRFSS 2002, 2003 and 2005



2

Possible Arthritis and Doctor-diagnosed Arthritis by Age Group, Utah BRFSS 2002, 2003 and 2005



Source: Utah BRFSS Survey

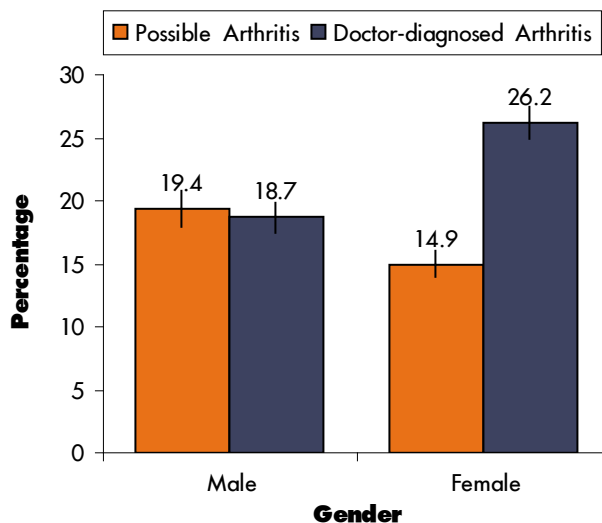
In addition, persons with possible arthritis were nearly three times less likely to report having fair or poor health (See Figure 3). They were also less likely to report seven or more days of poor mental health and three times less likely to report seven or more days of poor physical health during the past 30 days (See Figure 4), and were less likely to be overweight or obese (See Appendix D).

Persons reporting doctor-diagnosed arthritis were twice as likely to report limiting their usual activities (37.1%) compared to persons who reported possible arthritis (16.1%). They were also two times more likely to report their arthritis affected whether they worked and the type and amount of work they did (30.4% vs. 14.0%).

Finally, persons with possible arthritis were two times less likely to report being told to lose weight to reduce their joint symptoms (26.7% vs. 10.5%) than persons with arthritis. Only one-fourth of individuals with doctor-diagnosed arthritis (26.8%) could do everything they wanted to do on the day they were surveyed, compared to 49.2 percent of individuals with possible arthritis.

3

Fair or Poor Health by Possible Arthritis and Doctor-diagnosed Arthritis, Utah BRFSS 2002, 2003 and 2005



4

Poor Physical Health by Possible Arthritis and Doctor-diagnosed Arthritis, Utah BRFSS 2002, 2003 and 2005

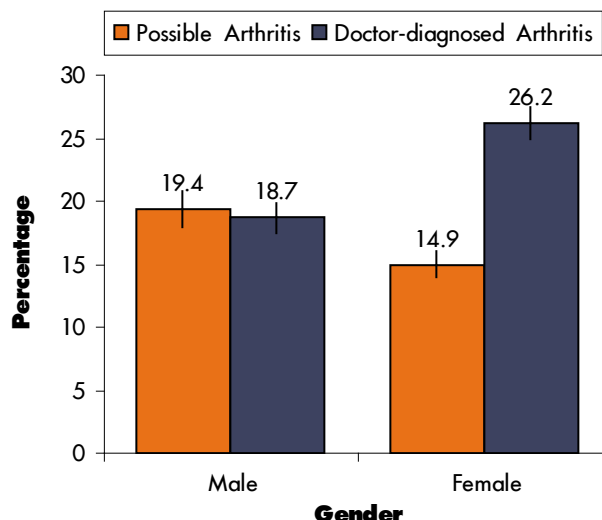


Table 6. Characteristics of Persons Who Reported Possible Arthritis and Doctor-diagnosed Arthritis

Characteristic	Possible Arthritis	Doctor-diagnosed Arthritis
Limited Usual Activities	16.1%	37.1%
Affected Work	14.0%	30.4%
Told to Lose Weight	10.5%	26.7%
Can Do Everything	49.2%	26.8%

Source: 2005 Utah BRFSS Survey

Study Limitations

The findings in this report are subject to the following limitations: The sample is drawn from the civilian, non-institutionalized adult population and excludes those in the military and in institutions, and those who have no phone service. Data are self-reported and not confirmed through medical record review. However, self-reporting of arthritis using the case finding question used in the BRFSS survey has been determined valid for surveillance purposes. Finally, the possible arthritis definition may not be capturing people with undiagnosed arthritis. Some people who meet the possible arthritis definition may have “pre-arthritis,” while others may have acute injuries or other conditions rather than undiagnosed arthritis.

Conclusions

Among persons who reported possible arthritis there was a higher prevalence of:

- Males
- Adults less than 50 years of age
- Adults reporting good or excellent health
- Adults reporting fewer than seven days of poor physical health
- Adults who were not overweight or obese
- Adults who did not limit their usual activities
- Adults whose joint symptoms did not affect whether or not they worked
- Adults who reported not being told to lose weight to ease their joint symptoms
- Adults who reported they could do everything they wanted to do

The BRFSS data show that adults with doctor-diagnosed arthritis reported a higher prevalence of fair or poor health, poor mental health and poor physical health that was statistically significant when compared to persons who reported possible arthritis.

Implications

The issue that state arthritis programs may want to consider based on these data is whether the symptoms of possible arthritis are serious enough to warrant developing interventions specific to this population. These data suggest they do not. Because of the relatively better health reported among persons with possible arthritis compared to persons with doctor-diagnosed arthritis, dedicating interventions to persons with possible arthritis may not be warranted. However, it is important to note there is a potential for undiagnosed arthritis that is captured by possible arthritis.

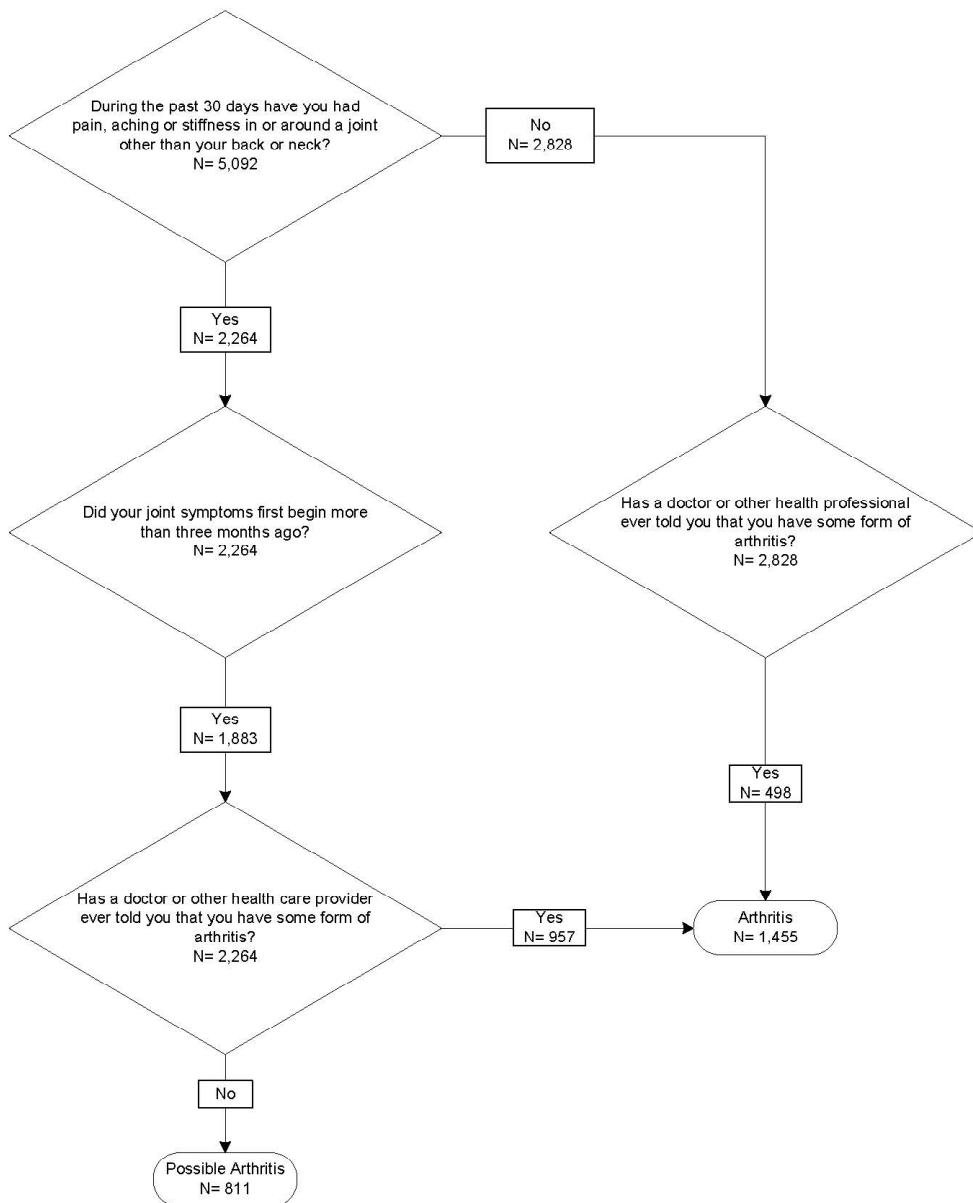
Recommendations

The Utah Arthritis Program supports the CDC Arthritis Program recommendation to replace the BRFSS questions about chronic joint symptoms with questions on subjects like pain level, work limitations and health-related quality of life, and to focus on persons with doctor-diagnosed arthritis.

References

1. CDC. Arthritis prevalence and activity limitations - United States, 1990. *MMWR* 1994;43:433-8.
2. Rao, J.K., Callahan, L.F., & Helmick, C.G. (1997). Characteristics of persons with self-reported arthritis and other rheumatic conditions who do not see a doctor. *Journal Rheumatol*, 24:169-73.
3. Bolen, J, PhD, Helmick, C.G., MD, Sacks, J.J., MD, & Langmaid, G, (2002). Prevalence of Doctor-diagnosed Arthritis and Possible Arthritis - 30 States, *MMWR* May 14, 2004/53(18):383-386.

Flow chart for BRFSS Arthritis Questions - 2005



(Note: Respondents who refused to answer or said they “didn’t know” and “missing responses” were eliminated from the analyses.)

Behavioral Risk Factor Surveillance System, State-added Arthritis Survey Questions - 2005

1. "How many months ago did those joint symptoms first begin?"
2. "How many years ago did those joint symptoms first begin?"
3. "Were those symptoms present on most days for at least one month?"
4. "Over the past 7 days, how many days have you had pain, aching, or stiffness from arthritis or joint symptoms?"
5. "On a scale of 0 to 10 where 0 is no pain and 10 is pain or aching as bad as it could be, over the past 7 days, how bad was your joint pain or aching on average?"
6. "Have you ever taken any prescription or non-prescription medication for these joint symptoms in the past 7 days?"
7. "Earlier you said you had never seen a doctor about your joint symptoms. Please tell me why you did not see a doctor about your joint symptoms?"
 1. Not that bad/not serious/not important
 2. Costs too much/no insurance
 3. Don't like doctors/didn't want to go
 4. Self-treatment works
 5. Just occurred/going to doctor soon
 6. No transportation/too far
 7. Other (Specify)
8. "Earlier you said you had seen a doctor for your joint symptoms. What did the doctor say was the cause of your joint symptoms?"
 1. Injury-related
 2. Bursitis/tendinitis/tennis elbow/carpal tunnel syndrome
 3. Bone spur
 4. Doctor didn't say/doctor didn't know
 5. Cartilage
 6. Body weight
 7. Age
 8. Other (Specify)

Other BRFSS Questions Used in This Report

"The next questions refer to your joints. Please do not include the back or neck. During the past 30 days, have you had any symptoms of pain, aching, or stiffness in or around a joint?"

"Did your joints symptoms first begin more than three months ago?"

"Are you now limited in any way in your usual activities because of arthritis or joint symptoms?"

"In this next question we are referring to work for pay. Do arthritis or joint symptoms now affect whether you work, the type of work you do or the amount of work you do?"

"Are you now limited in any way in your usual activities because of arthritis or joint symptoms?"

"Thinking about your arthritis or joint symptoms, which of the following best describes you today?"

"Has a doctor or other health professional ever suggested losing weight to help your arthritis or joint symptoms?"

"What is your age?"

"What is the highest grade or year of school you completed?" 1="Did not graduate High School" 2="High School graduate" 3="Attended College or Technical School" 4="College or Technical School Graduate"

"Indicate sex of respondent."

"Is your annual household income from all sources:"

01="<\$10,000 " 02="\$10,000 to <\$15,000" 03="\$15,000 to <\$20,000" 04="\$20,000 to <\$25,000" 05="\$25,000 to <\$35,000" 06="\$35,000 to <\$50,000" 07="\$50,000 to <\$75,000" 08="\$75,000+"

Are you ? 1="Married" 2="Divorced" 3="Widowed" 4="Separated" 5="Never Married" 6="A member of an unmarried couple"

What is your race? 1="White" 2="Black" 3="Asian, Pacific Islander" 4="American Indian, Alaska Native" 5="Other Specify"

Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Height in Meters

Weight in Kilograms

Behavioral Risk Factor Surveillance System, 2002, 2003 and 2005 Survey Results

Characteristic	Possible Arthritis	LCI	UCI	Doctor-diagnosed Arthritis	LCI	UCI
Age						
18-34	16.7%	15.2%	18.2%	7.5%	6.5%	8.6%
35-49	20.9%	19.3%	22.6%	19.0%	17.4%	20.6%
50-64	17.1%	15.5%	18.9%	40.3%	38.0%	42.6%
65-74	12.1%	10.0%	14.6%	56.1%	52.6%	59.5%
75+	8.2%	6.4%	10.5%	55.2%	51.3%	59.1%
Education						
Less than H.S.	14.8%	11.7%	18.4%	25.9%	21.9%	30.3%
H.S. Grad.	18.2%	16.5%	20.0%	22.9%	21.3%	24.7%
Some College	17.1%	15.6%	18.6%	24.1%	22.5%	25.7%
College Grad.	16.8%	15.4%	18.3%	19.3%	17.9%	20.8%
Gender						
Male	19.4%	18.0%	20.8%	18.7%	17.5%	19.9%
Female	14.9%	13.9%	16.0%	26.2%	24.9%	27.4%
Income						
< \$20,000	14.9%	12.5%	17.5%	26.6%	24.0%	29.5%
\$20,000 -50,000	17.2%	16.0%	18.6%	22.6%	21.2%	24.0%
\$50,000-75,000	19.4%	17.4%	21.6%	20.3%	18.4%	22.3%
\$75,000 +	16.5%	14.7%	18.5%	21.0%	18.8%	22.9%
Marital Status						
Married	17.4%	16.5%	18.5%	23.2%	22.1%	24.2%
Divorced	19.6%	16.7%	22.7%	33.0%	29.7%	36.5%
Widowed	10.3%	8.1%	13.1%	54.2%	50.0%	58.6%
Separated	16.0%	10.1%	24.6%	17.3%	11.4%	25.5%
Never Married	16.0%	13.7%	18.8%	10.3%	8.6%	12.4%
Unmarried Couple	19.8%	14.0%	27.4%	13.1%	8.3%	20.0%
Race						
White	17.6%	16.7%	18.5%	23.3%	22.4%	24.3%
Black	15.1%	7.2%	28.8%	14.5%	6.4%	29.5%
Asian/Pacific Isl.	11.7%	6.6%	19.8%	7.9%	4.5%	13.5%
American Indian	15.8%	4.2%	26.0%	31.1%	21.6%	42.4%
Other	11.0%	8.1%	14.8%	12.4%	9.4%	16.1%
Health Status						
Fair or Poor Health	16.9%	14.5%	19.5%	49.9%	46.6%	53.2%
Poor Mental Health						
7+ days past 30 days	22.8%	20.3%	25.5%	28.3%	25.8%	31.0%
Poor Physical Health						
7+ days past 30 days	15.4%	13.4%	17.7%	47.3%	44.3%	50.4%
Body Mass Index						
Ideal	15.5%	14.2%	16.9%	17.3%	16.1%	18.6%
Overweight	18.2%	16.8%	19.7%	23.0%	21.5%	24.5%
Obese	19.7%	17.8%	21.8%	33.6%	31.3%	36.0%
PHQ 9 Question						
Depression*	15.8%	12.5%	19.7%	17.7%	15.2%	20.5%